

What is claimed is:

1. A display comprising:

a housing having a first board; and

5 a plurality of modules each having a plurality of  
electron emitters arrayed on a second board;

said modules being arrayed on said first board;

at least said modules being electrically connected to  
each other;

10 said modules being sealed in vacuum in said housing.

2. A display according to claim 1, wherein said housing  
has a transparent plate facing said first board, said  
transparent plate supporting, on a surface thereof facing  
15 said first board, an electrode for producing an electric  
field between the electrode and said electron emitters, and  
a phosphor disposed on said electrode, and wherein electrons  
emitted from said electron emitters impinge on said phosphor  
to excite the phosphor for thereby emitting light therefrom.

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3. A display according to claim 1, wherein each of said  
electron emitters comprises:

an emitter section made of a dielectric material; and

a first electrode and a second electrode which are  
25 disposed in contact with said emitter section;

and wherein when a drive voltage is applied between  
said first electrode and said second electrode, at least a

portion of said emitter section has a polarization reversed or changed to emit electrons therefrom.

5 4. A display according to claim 3, wherein said first electrode and said second electrode are disposed in contact with a principal surface of said emitter section, with a slit defined between said first electrode and said second electrode, said emitter section being partly exposed through said slit.

10 5. A display according to claim 3, wherein said first electrode is disposed on a first surface of said emitter section, and said second electrode is disposed on a second surface of said emitter section.

15 6. A display according to claim 3, wherein said emitter section is made of at least one of a piezoelectric material, an electrostrictive material, or an anti-ferroelectric material.

20 7. A display comprising:  
a housing having a first board; and  
a plurality of chips each having an electron emitter;  
said chips being arrayed on said first board;  
25 at least said chips being electrically connected to each other;  
said chips being sealed in vacuum in said housing.

8. A display according to claim 7, wherein said housing has a transparent plate facing said first board, said transparent plate supporting, on a surface thereof facing said first board, an electrode for producing an electric field between the electrode and said electron emitters, and a phosphor disposed on said electrode, and wherein electrons emitted from said electron emitters impinge on said phosphor to excite the phosphor for thereby emitting light therefrom.

9. A display according to claim 7, wherein each of said electron emitters comprises:

an emitter section made of a dielectric material; and a first electrode and a second electrode which are disposed in contact with said emitter section;

and wherein when a drive voltage is applied between said first electrode and said second electrode, at least a portion of said emitter section has a polarization reversed or changed to emit electrons therefrom.

10. A display according to claim 9, wherein said first electrode and said second electrode are disposed in contact with a principal surface of said emitter section, with a slit defined between said first electrode and said second electrode, said emitter section being partly exposed through said slit.

11. A display according to claim 9, wherein said first

electrode is disposed on a first surface of said emitter section, and said second electrode is disposed on a second surface of said emitter section.

5           12. A display according to claim 9, wherein said emitter section is made of at least one of a piezoelectric material, an electrostrictive material, or an anti-ferroelectric material.

10           13. A display comprising:  
a housing having a first board; and  
a plurality of electron emitters directly formed as a film on said first board;  
said electron emitters being sealed in vacuum in said  
15 housing.

20           14. A display according to claim 13, wherein said housing has a transparent plate facing said first board, said transparent plate supporting, on a surface thereof facing said first board, an electrode for producing an electric field between the electrode and said electron emitters, and a phosphor disposed on said electrode, and wherein electrons emitted from said electron emitters impinge on said phosphor to excite the phosphor for thereby  
25 emitting light therefrom.

15. A display according to claim 14, wherein each of

said electron emitters comprises:

an emitter section made of a dielectric material; and  
a first electrode and a second electrode which are  
disposed in contact with said emitter section;

5 and wherein when a drive voltage is applied between  
said first electrode and said second electrode, at least a  
portion of said emitter section has a polarization reversed  
or changed to emit electrons therefrom.

10 16. A display according to claim 14, wherein said first  
electrode and said second electrode are disposed in contact  
with a principal surface of said emitter section, with a  
slit defined between said first electrode and said second  
electrode, said emitter section being partly exposed through  
15 said slit.

17. A display according to claim 14, wherein said first  
electrode is disposed on a first surface of said emitter  
section, and said second electrode is disposed on a second  
20 surface of said emitter section.

18. A display according to claim 14, wherein said  
emitter section is made of at least one of a piezoelectric  
material, an electrostrictive material, or an anti-  
25 ferroelectric material.

19. A display comprising:

a housing having a first board; and

a plurality of vacuum-sealed modules each having a plurality of electron emitters arrayed on a second board and sealed in vacuum;

5           said vacuum-sealed modules being arrayed on said first board;

          at least said vacuum-sealed modules being electrically connected to each other.

10           20. A display according to claim 19, wherein each of said vacuum-sealed modules has a transparent plate facing said second board, said transparent plate supporting, on a surface thereof facing said second board, an electrode for producing an electric field between the electrode and said  
15           electron emitters, and a phosphor disposed on said electrode, and wherein electrons emitted from said electron emitters impinge on said phosphor to excite the phosphor for thereby emitting light therefrom.

20           21. A display according to claim 19, wherein each of said electron emitters comprises:

          an emitter section made of a dielectric material; and  
          a first electrode and a second electrode which are disposed in contact with said emitter section;

25           and wherein when a drive voltage is applied between said first electrode and said second electrode, at least a portion of said emitter section has a polarization reversed

or changed to emit electrons therefrom.

22. A display according to claim 21, wherein said first electrode and said second electrode are disposed in contact with a principal surface of said emitter section, with a slit defined between said first electrode and said second electrode, said emitter section being partly exposed through said slit.

23. A display according to claim 21, wherein said first electrode is disposed on a first surface of said emitter section, and said second electrode is disposed on a second surface of said emitter section.

24. A display according to claim 21, wherein said emitter section is made of at least one of a piezoelectric material, an electrostrictive material, or an anti-ferroelectric material.